

Acid/Base indicator: \_\_\_\_\_ that changes \_\_\_\_\_ in the presence of an \_\_\_\_\_ or a \_\_\_\_\_.

Solution	Litmus paper (R→B, B→R, or NC)	Phenolphthalein (color or NC)	Bromothymol Blue (color or NC)	Cabbage Juice (color or NC)
HNO <sub>3</sub>				
NaOH				
KOH				
H <sub>2</sub> SO <sub>4</sub>				

Conclusion Questions:

1. Litmus turns \_\_\_\_\_ in an acid and \_\_\_\_\_ in a base.
2. Phenolphthalein (phth) turns \_\_\_\_\_ in an acid and \_\_\_\_\_ in a base.
3. Bromothymol blue turns \_\_\_\_\_ in an acid and \_\_\_\_\_ in a base.
4. Cabbage juice turns \_\_\_\_\_ in an acid and \_\_\_\_\_ in a base.

Strong Acids: dissociate \_\_\_\_\_ in \_\_\_\_\_ (ex: \_\_\_\_\_)

Weak Acids: dissociate \_\_\_\_\_ in \_\_\_\_\_  
(ex: \_\_\_\_\_ or \_\_\_\_\_)

Strong Bases: dissociate \_\_\_\_\_ in \_\_\_\_\_ (ex: \_\_\_\_\_)

Weak Bases: dissociate \_\_\_\_\_ in \_\_\_\_\_  
(ex: \_\_\_\_\_ or \_\_\_\_\_)

pH = \_\_\_\_\_

0 \_\_\_\_\_ 7 \_\_\_\_\_ 14

Determine the pH of a solution of HCl that has a molarity of  $1 \times 10^{-4}$  M.

Calculate the pH for a solution of  $\text{HNO}_3$  with a molarity of \_\_\_\_\_.

Calculate the pH for a solution of  $\text{H}_2\text{SO}_4$  with a molarity of \_\_\_\_\_.

$[\text{H}^+][\text{OH}^-] =$  \_\_\_\_\_

Calculate the pH of a solution of  $\text{NaOH}$  with a molarity of  $3.0 \times 10^{-2} \text{ M}$ .

Find the pH for a solution of  $\text{Ca}(\text{OH})_2$  with a molarity of \_\_\_\_\_.

Calculate both the hydrogen ion concentration and the hydroxide ion concentration for an aqueous solution that has a pH of \_\_\_\_\_.

#### The Chemistry Quiz

CR1.

CR2.

1.

2.

3.

4.

5.